

A cure for the ague: the contribution of Robert Talbor (1642–81)

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Intermittent fevers, known from the Middle Ages as agues and later as malaria, are recorded from the fifth century BC. Many remedies, ingenious, bizarre and often barbarous, were tried over the centuries. In the West, until the eighteenth century many of the remedies were based on philosophical theories of fevers evolved by Hippocrates, Galen and others; they consisted for the most part in purging and phlebotomy, and probably killed more people than they cured¹. In the first part of the seventeenth century a reliable cure came to hand, although two hundred years were to elapse before it was accepted by the medical profession.

CINCHONA

In the latter part of the sixteenth century Spaniards, probably Jesuit priests in the Viceroyalty of Peru, discovered that the bark of a tree known in the Quechua language as *quina-quina* or *kina-kina* had febrifugal properties in addition to exuding a balsam which the Incas used mainly for treating wounds. Later, in the 1630s, a different kind of tree was identified whose bark was to prove much more effective as a febrifuge, and was named by the Spaniards as *árbol de calenturas* or fever tree. This tree was given the generic name of *Cinchona* by Linnaeus in 1742, and this is used for convenience in this paper. Not until the 1820s was the alkaloid in cinchona bark most effective in curing fever identified by two French chemists who named it *quinine*—after the wrong tree¹.

This paper will not dwell upon the medical and botanical aspects of the complex and still confused history of the cinchona bark, but will deal chiefly with persons who were involved in one way or another with the bark, its dissemination and its use in Europe. The story of how cinchona was discovered and disseminated in the seventeenth century reflects the bitter fight between the conventional physicians of the age—the Dogmatists, adhering to the theory of humours, purges and phlebotomy, and the Empirics, who sought out medical remedies

through experiment and observation. It was not effectively put together and critically examined until the 300th anniversary of the introduction of cinchona into Europe, assumed to have been in 1630 (though this date is by no means certain). At the tercentenary celebrations in London a paper entitled *The Jesuits' Bark* was read by Alban Goodier, Archbishop of Hierapolis, who began:

There are probably few events of history about which so many legends and false statements have grown as about the history of cinchona. Many writers have tried to discover its origin, and how first it came to our hemisphere, and for lack of precise information have endeavoured to supplement their scanty resources by calculations or guesses of their own. Those calculations, once set in type, have been willingly accepted by succeeding authors.

In his paper Goodier pointed out some of the legends and false statements². His attack was followed in 1941 by A W Haggis, a medical historian at the Wellcome Medical Museum, who published two articles in the *American Bulletin of the History of Medicine* dealing with the numerous errors—botanical, linguistic, medical and historical—revealed by a close analysis of the documentary material. Haggis points out, with respect to a confusion of botanical terminology, that

one of the most striking characteristics of this dispute is the profound ignorance of protagonists as well as opponents concerning the real identity of the plant about which they wrangled³.

This dispute concerns cinchona and the tree called quina-quina. The latter, also known in Europe as the Peruvian balsam tree, exuded a balsam which the Vatican authorized for use in America as Holy Chrism. Jesuit priests in La Paz collected its bark in the early years of the seventeenth century for shipment to Rome, where it was distributed as a febrifuge under its native name of quina-quina. Later, after the discovery of the cinchona tree first recorded by the Augustinian creole Antonio de la Calancha in Lima in 1633, cinchona bark (which was not for some time established as being superior to quina-quina in the treatment of fevers) was exported by merchants as a substitute for Peruvian balsam bark⁴.

This export would have begun sometime before 1653, when the remarkable naturalist the Jesuit Bernabé Cobo

Thomas Keeble died before his paper could be submitted to a journal. It has been subedited for publication by his friend Geoffrey Chamberlain as a tribute to a great scholar.

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wrote in his *Historia del Nuevo Mundo* that the powders from the fever tree 'son ya tan conocidos y estimados . . . no sólo en todas las Indias, sino en Europa, que con instancia los envian a pedir de Roma'⁵. Antonio de la Calancha had earlier written that the powder had produced miraculous results in Lima³.

The cinchona bark acquired various names over the years; it entered the *London Pharmacopoeia* in 1677 as Peruvian bark (*cortex Peruvianus*). However, the label of quina-quina (or quinaquina or kinakina) persisted. For a long time, the medical profession lacked the botanical knowledge to distinguish one tree from the other; and even when this knowledge became available 'writers from the seventeenth century until the present have been prone to believe that all facts relating to quina-quina belong to the history of Cinchona'³. When the five alkaloids in the cinchona bark were at last isolated in the 1820s one of them—the most important—was called quinine.

THE COUNTESS'S POWDER

Among the explanations of the many different names that the bark attracted—Peruvian bark, cascarilla, the Countess's powder, Jesuits' powder, Cardinal Lugo's powder, le remède anglais:

'No story in medical history has captured the imagination more completely than the romantic account of the cure of the Countess of Chinchón of malaria by the use of Chinchona Bark, during the time that her husband was viceroy of Peru—from 1628 to 1639'³.

This story, Haggis states, was attributed to a letter from an Italian merchant long resident in Peru, and was related in a book in defence of quina-quina published in Genoa in 1663 by an Italian physician, Sebastian Bado. The story goes that the Countess fell ill of a tertian fever some time between 1629 and 1633. The Spanish Governor of Loja, south of Lima, heard of her illness and informed the Viceroy that he had a remedy which he unreservedly recommended and which would cure the Countess of her fever. She agreed to take it; the Governor brought it to Lima; and she was quickly cured. The people of Lima, much subject to agues, begged the Countess to reveal the remedy to them. She not only did so, but also ordered supplies to be sent to Lima and herself dispensed the remedy to the people. The bark was consequently known as the Countess's powder.

This story was not questioned until 1930, and became so well known that when Linnaeus, in 1742, was casting round for a generic name of the fever bark tree, he decided to name it *Chinchona* in honour of the Countess and her charitable action in Lima. Confusion over Spanish, Latin and Italian orthography led to the accidental dropping of the first h; and, despite the occasional protests, cinchona it became and has remained. Over the years after Bado

published it, the tale acquired further detail, and in the final version before it was discredited, related by Clements Markham in his *Travels in India and Peru* (1862), we are told that the Countess's name was Ana de Osorio, and that when her husband's tour of duty ended in 1639 she took home from Lima to Chinchón a substantial supply of the bark. According to Markham she:

'administered the powder to the sufferers from tertian agues on her lord's estates in the fertile but unhealthy vegas of the Tagus, Tajuna and Jarama. She thus spread blessings around her, and her good deeds are even now remembered by the people of Chinchón and Colmenar in local tradition'.

The Archbishop of Hierapolis and Haggis almost entirely discredit this story. From them it emerges that there is no mention in contemporary writings of the Countess's illness, cure or charities. In particular, the detailed official diary of the Viceroy, kept scrupulously by his secretary, Juan Antonio de Suardo⁶, which records every illness suffered by the Count and his wife, shows that while the Count was the victim of frequent tertian fevers (which appear to have been treated only by phlebotomy and purging) his wife was an active and healthy woman, falling ill only twice during her ten years in Peru. Markham states that the Countess was Ana de Osorio. But this lady was the Count's first wife, who had died before he left Spain for Peru in 1628, having married again before his departure. His second wife, who joined him in Lima in 1629, was Francisca Henríquez de Ribera; but she died on 14 January 1641, in Cartagena de las Indias on her way home to Spain; the tale of her taking a supply of the bark back with her is clearly not true. It is of course possible, and even likely, that the Count himself took some home to Chinchón: there are reports to support this. As a parenthesis it is noteworthy how many reputable reference works and histories perpetuated the details in earlier accounts many years after Haggis's articles of 1941⁷.

CINCHONA IN EUROPE

How did cinchona bark first reach Europe? By present information, it seems to have been in 1643 or a little earlier, since in that year a Belgian doctor, van der Heyden, in his book *Discours et Advis sur les Flus de Ventre Douloureux*, refers to the powder having been used in Europe for tertian and quartan fevers. Among the persons who, it has been suggested, might have brought cinchona bark to Europe two never returned to Spain—the Viceroy's personal doctor Juan de Vega, and the Jesuit historian, Bernabé Cobo. Michael Belga, doctor to Chinchón's successor, the Marquis of Mancera, and Mancera himself, are ruled out because they did not leave the viceroyalty between 1641 and 1650, and had not previously been there³. Although Chinchón

may well have taken a supply back with him in 1641, the main supply agency was probably the Jesuit missions. It is almost certain that the Jesuits in La Paz supplied Rome early in the seventeenth century with bark from the balsam tree (quina-quina mark I), and we can surely accept the statements of medical authors, writing before Bada in 1663, that the Jesuits in the viceroyalty were, in about 1640, shipping cinchona bark (quina-quina mark II) either to Belgium or to Rome. There is no doubt that in Rome at some date after 1643, when he became a Cardinal, the Spanish Jesuit jurist and theologian Juan de Lugo was receiving supplies from America. Alonso de Andrade, in his *Varones Ilustres . . . de la Compañía de Jesus* (1666), says of him that he 'hazía particular provision de los polvos de la India para las quartanas, que los daba por su propia mano a los pobres que lo necesitaban'.

It is likely that the use of cinchona was initially confined to Rome and the campagna. But Jesuit Congregations were held in Rome in 1646, 1649 and 1650, at which Jesuits from countries throughout mainland Europe would have learnt about the medical use of the bark; it was discussed at the 1649 Congregation⁸. This information they would have taken back with them to their respective countries. Cardinal Lugo continued indefatigably to dispense the remedy until his death in 1660, and also fought to get it accepted by the regular medical profession. The Pope, Innocent X, backed his campaign and authorized the chief Papal physician to conduct a study of the medicinal properties of the bark. He reported that he had found no harmful properties in it, and that it was a most effective remedy against fevers. Lugo arranged for free distribution of the bark from his palace and in the pharmacy of the Collegio Romano. In 1651 a pamphlet, the *Schedula Romana*, was published for the guidance of apothecaries in the administration of the remedy.

In 1652 the Cardinal's campaign, which had until then prospered, suffered a setback. The Archduke Leopold of Austria fell ill with fever, and was prescribed the remedy according to the instructions in the *Schedula*. A cure resulted, but after a month the fever returned. In fact, as later experience revealed, a second treatment would almost certainly have effected a permanent cure; but the Archduke was so incensed that he had not been cured at once that he ordered his physician to write a book attacking the remedy and warning against its dangers. Other physicians joined in the polemics, and the battle was at its height when a further blow struck the Papal camp. In 1655 a severe epidemic of the plague ravaged Rome, and it was suggested that the new remedy should be tried to prove its worth. Not surprisingly it failed; the plague is very different from the intermittent fevers curable by the Jesuits' powder. It seemed then that the battle was lost. In fact the argument had been only temporarily suspended, though for some time the powder was discredited and out of favour.

CINCHONA IN ENGLAND

By this time the bark had become known in France and England. The writer and sailor Sir Kenelm Digby, himself a proponent of sympathetic medicine, who had spent some time in France and Italy, felt able to return to England in 1655, and in the following year wrote of . . . 'The bark of a tree that infallibly cureth all intermittent fevers. It cometh from Peru, and is the bark of a tree called by the Spaniards kina-kina'. By this time the ague was spreading over England, and by 1658 had become endemic in the low-lying country of the south-east. This was the year the powder was openly advertized in the London weekly *Mercurius Politicus*, which announced that:

'the excellent powder, known by the name of 'Jesuits' Powder', may be obtained . . . at the lodgings of Mr James Thompson, merchant from Antwerp, or at Mr John Crook's, bookseller, with directions for its use.'

The remedy was attested by the President of the Royal College of Physicians, Dr Prujean. In the same year the first recorded trial of the drug in England took place, when it was administered to an Alderman of the City of London. Unfortunately, he did not recover and his death was attributed to the Jesuits' powder—a severe setback to its continued use. It is said that Cromwell, who died of fever in September 1658, was offered the remedy and refused it¹.

ROBERT TALBOR

Some 10 years later news spread in Essex and to London of a man, Robert Tabor or Talbor, practising in the Essex marshes, who had an infallible cure for the agues. Soon his services were in demand in London, where in 1672 he published a slim volume entitled *Pyretologia, A Rational Account of the Cause and Cure of Agues*. Born in Cambridgeshire in 1642, the son of the Registrar of the Bishop of Ely and grandson of the Registrar of the University of Cambridge, Talbor was, after attending the Perse School for some years, apprenticed to an apothecary before his admission as a Sizar to St John's College in May 1663 at the age of 20. His ambition was to study the nature and cure of agues. On going down in 1668, without proceeding to a degree, he went to Essex to live near, he explained, 'the seaside where the agues are the epidemical diseases'. Here he developed, by experiment and observation, an effective remedy whose composition he kept to himself. In his book, though he describes the method of administration in careful detail, all he says of the specific is that it is 'a preparation of four vegetables, whereof two are foreign and the other domestick'⁹. On the Jesuits' powder he issues a strong warning:

And let me advise the world to beware of all palliative Cures and especially that known by the name of Jesuits' Powder, as it is given by unskilful hands for I have seen most dangerous effects follow the taking of the Medicine uncorrected and unprepared . . . ; and such as do take it have only a cessation for a time, the ague returning in a fortnight or three weeks generally. Yet is this Powder not altogether to be condemned; for it is a noble and safe medicine, if rightly prepared and corrected, and administered by a skilful hand; otherwise as pernicious a medicine as can be taken.

This last caveat and its qualification raise the suspicion that Talbor is protecting his position, a suspicion that is confirmed a little further on in his *Pyretologia*:

As I find the world grateful in their acceptance of the Treatise I intend hereafter to publish a larger, and with it a fuller account of my particular method, and medicine, not being willing to conceal such useful remedies from the world any longer, than till I have made some little advantage myself, to repay that charge and trouble I have been at in the search and study of so great and unheard of secrets.

In fact, it was not until the year after his death in 1681 that his secret was revealed—through the agency of Louis XIV—by which time Talbor had made not only some little advantage to himself but also a major contribution to the advancement of clinical medicine. His secret was, of course, the very powder that he had warned against but not condemned. Possibly, his success was in the repeated dosage if required. It seems very likely that, by his own efforts and self-confidence, Robert Talbor would have made a lucrative career for himself in London: but by a nice disposition of fate he was to go much further afield and achieve greater fame.

While he was practising in Essex he happened to treat and cure a French officer, who with others of the French forces serving in Flanders against the Dutch, had contracted an intermittent fever whilst on active service and had been landed in the Essex area to recuperate. It would seem that this officer suffered a relapse shortly before he was due to attend for a week's duty at the Court of Charles II, and Talbor was able to cure him in time to join the King on board ship when he embarked for Sheerness and to visit the fleet which had assembled there after the indecisive battle against the Dutch in Sole Bay on 28 May 1672. Many years later the Frenchman recorded this visit and subsequent events relating to Talbor on the fly-leaves of a copy of Leclerc's *Histoire de la Médecine*, published in 1702, which contains references to the cure of fevers and the use of cinchona bark. He relates 'When I went aboard ship I could not avoid telling the whole story [of his cure by Talbor] to the most inquisitive King in the whole world, who is also the greatest patron of empirics.'

He goes on to tell how the King 'ordered me to bring the man to him, and made many experiments with the

powder'. Later John Evelyn noted that the Royal Society carried out some experiments. So impressed was Charles with the Frenchman's 'petit médecin' that he soon appointed Talbor one of his physicians in ordinary and in 1678 honoured him by a knighthood. Later, the note continues, in August 1679, the King himself was cured of a severe fever by Talbor's remedy. Talbor himself was probably in Paris at this time, where, the note records, the King had sent him to cure his niece Marie Louise. Talbot, it seems, became very rich in Paris and in Madrid where he accompanied her when she married Carlos II of Spain. This note appears to be authentic. If in some details it differs from other sources the conflicts are few: it was written 20 years after the events it chronicles.

TALBOR IN EUROPE

Madame de Sévigné, with her constant concern for her daughter's health and her interest in the ailments of others¹⁰, is a good source for Talbor's activities in France. Her letters give no indication that Charles II sent him to Paris to cure his niece, Marie Louise of Orléans, daughter of his sister who was married to the Duke of Orléans, though she records that Marie Louise suffered an attack of the quartan ague in October 1677 and was treated by Carmelite nuns who administered a powerful emetic. It is more likely that Charles sent Talbor to accompany her to Madrid at the time of her marriage to Carlos II. After a proxy marriage in Fontainebleau at the end of August 1679, she set out for Spain on 20 September. Madame de Sévigné records, on 29 September, that 'Le chevalier Talbor est allé en Espagne', and the *Paris Gazette*, on 7 October, that the young Queen having heard in Poitiers that the Count of Montaignu, Lieutenant-General de Guienne, was ill in Bordeaux, had sent her chief physician, the Chevalier Talbot, by posthorse, to attend him. Maria Luisa, as she was to become, took a large retinue of ladies-in-waiting and household staff with her to Madrid. Such a suite was not welcome under the protocol of the Spanish Court, and their behaviour offended the austere Spaniards. Carlos II soon had nearly all of them repatriated. The Duque de Maura, in his *Vida y Reinado de Carlos II*, notes that: 'the ladies in waiting returned to Paris . . . as also all the men . . . Among them figured the English doctor Talbor'. No date is given for this expulsion, but Talbor was back in Paris by March 1680, as he treated, but failed to save, La Rochefoucauld on the 17 March. This was only a temporary setback in the list of his cures. On 29 September, Madame de Sévigné could write: 'Le chevalier de Grignon . . . a été guéri, et M. D'Evreux aussi, par notre Anglois: son remède a fait de merveilles cette année; M. de Lesdiguières en a été guéri comme par miracle, et mille autres'.

The high point of Talbor's ministrations in France was yet to come. Early in October 1680 the Dauphin fell ill with fever; he was given Talbor's remedy—by now widely known as 'le remède anglais'—by a French physician, Phillipe, who lived with Talbor and had been made privy to the formula. This effected a cure; but in November the Prince suffered a relapse, and Louis called in the Englishman who, wrote Madame de Sévigné, 'a promis au Roi sur sa tête . . . de guérir Monseigneur dans quatre jours . . . Le roi lui a fait composer son remède devant lui, et lui confie la santé de Monseigneur'. The Dauphin recovered.

TALBOR BACK IN ENGLAND

Within a year of effecting this most fortunate cure, Sir Robert Talbor was back in England. He was elected Fellow Commoner of his college, St John's, in 1681, but did not live long to enjoy the honour, as he died in Cambridge in October of the same year. He was buried in Trinity Church on 17 November. He had earlier arranged for a family memorial to be set up in the church which reads in part:

Dignissimus Dominus Robertus Talbor, alias Tabor, Eques Auratus, ac medicus singularis, unicus febrium malleus, Carolo II. ac Ludovico XIV. illi M Britanniae, huic Galiae, serenissimi Galiarum Delphine, plurimisque principibus nec on minorum gentium ducibus ac Dominis probatissimis, sic suis parantavit.

Had Madame de Sévigné been charged with drafting this funerary inscription it might have been even more eulogistic: to her 'homme divin'.

THE ENGLISH REMEDY

Talbor's own lapidary claim to have cured Louis XIV has not been confirmed by any contemporary reference, though Louis' own physician administered the remedy to the King some years after Talbor's death¹¹. But there is no doubt that Talbor had dealings both medical and financial with His Most Christian Majesty. Louis XIV was most anxious to know the details of the English remedy, and offered to buy it from Talbor, who eventually agreed, but only on condition that the secret should not be disclosed until after Talbor's death. The prescription was entrusted to Louis XIV's chief physician, D'Aquin, who was instructed by the King soon after Talbor's death to hand the papers to a controversial medical figure, Nicholas de Blégné, surgeon to the Duke of Orléans, to write up the remedy for publication¹². This appeared in 1686 in Paris, entitled 'La connoissance certaine et la prompte et facile guérison des fievres; avec des Particularités curieuses & utiles sur le Remede Anglois, qui a esté publié par ordre du Roy . . .'¹³.

Later in that year there was published at the Black Bull in Cornhill a slim volume titled *The English Remedy or Talbor's Wonderful Secret for Curing of Agues and Feavers, sold by*

the Author Sir Robert Talbor, to the most Christian King, and since his death, ordered by his Majesty to be Published in French, for the benefit of his Subjects, and now translated into English for the Publick Good. This is an interesting production. Despite the titles, Talbor is the author of certain sections only. The text consists of Talbor's notes on the preparation and administration of the remedy, each followed by comments, some critical, some grudgingly approving, by Louis' chief physician D'Aquin—the Dogmatist fighting to the last against the successful Empiric. D'Aquin's last words were:

We must confess that we are in some manner obliged to Sir Robert Talbor for having given us a Preparation much to be preferred before all other, whether he hath been the inventor, or that he hath hit upon it by chance; and it may be said that his boldness (which would have been taken for a criminal rashness in any but an Empirick) hath not a little contributed to the knowledge which we have at present of its use and manner of application.

Essentially the battle was won; but the war grumbled on for a long while before purging and bloodletting at last gave way to purely medicinal treatment. In some countries this was not until the mid-nineteenth century: in the USA it is reported that 'bleeding and purging and the unlimited use of coffee and whisky were the treatments for malaria favoured particularly by the frontiersmen'⁷.

AFTER TALBOR

By the end of the eighteenth century the curtain had come down on the events and developments touched on in this paper, a sequence that might be described as the first chapter in the history of cinchona. The next chapter, covering the nineteenth century, would include the isolation of the alkaloids in the bark, the spread of the use of quinine to tropical countries and colonies and its availability to the poor, the establishment of cinchona plantations round the world, particularly in British India and Dutch Java, and the discovery by Sir Ronald Ross in 1897–98 of the cause of malaria. The last chapter, not yet complete, would cover the production of manufactured chemical substitutes for quinine in time for them to have an important effect in the Second World War, and the global attack mounted against malaria in the third world by the World Health Organization from 1955⁷.

In 1785 a distinguished physician, Sir George Barker FRS, read to the Royal College of Physicians a paper on the agues, which included a detailed account of cinchona bark¹⁴. Sir George ended his paper with the following paragraph, which provides a fitting peroration to the first chapter of the story of cinchona and a well merited tribute to Sir Robert Talbor:

Had it not been for the casual experience of an uncivilized people, it might never had been discovered, that there existed, in the stores of

nature, a specific febrifuge. Had not the influence of a great religious society, unconnected with the practice of physic, counteracted prevailing prejudices, at an early period, this medicine, though brought into Europe, might have long remained in obscurity, unknown and useless. And lastly, had not physicians been taught by a man, whom they, both abroad and at home, vilified, as an ignorant empiric, we might, at this day, have had a powerful instrument in our hands, without knowing how to use it in the most effectual manner.

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